U.S. Department of Education
2011 - Blue Ribbon Schools Program
A Public School

School Type (Public Schools): (Check all that apply, if any) ☐ Charter ☐ Title 1 ☑ Magnet ☐ Choice

Name of Principal: Ms. Jovan Wells

Official School Name: School of Science and Engineering School

School Mailing Address: 1201 E. Eighth St
Dallas, TX 75203-2545

County: Dallas State School Code Number: 057906026

Telephone: (972) 925-5964 E-mail: jgrantwells@dallasisd.org

Fax: (972) 925-6037 Web URL: http://www.semagnetschool.org/

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I - Eligibility Certification), and certify that to the best of my knowledge all information is accurate.

_____ Date _____
(Principal's Signature)

Name of Superintendent*: Dr. Michael Hinojosa Superintendent e-mail: HinojosaM@dallasisd.org

District Name: Dallas Independent School District District Phone: (972) 925-3700

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I - Eligibility Certification), and certify that to the best of my knowledge it is accurate.

_____ Date _____
(Superintendent's Signature)

Name of School Board President/Chairperson: Mr. Adam Medrano

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I - Eligibility Certification), and certify that to the best of my knowledge it is accurate.

_____ Date _____
(School Board President's/Chairperson's Signature)

**Private Schools: If the information requested is not applicable, write N/A in the space.*

The original signed cover sheet only should be converted to a PDF file and emailed to Aba Kumi, Blue Ribbon Schools Project Manager (aba.kumi@ed.gov) or mailed by expedited mail or a courier mail service (such as Express Mail, FedEx or UPS) to Aba Kumi, Director, Blue Ribbon Schools Program, Office of Communications and Outreach, U.S. Department of Education, 400 Maryland Ave., SW, Room 5E103, Washington, DC 20202-8173.

PART I - ELIGIBILITY CERTIFICATION

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The signatures on the first page of this application certify that each of the statements below concerning the school's eligibility and compliance with U.S. Department of Education, Office for Civil Rights (OCR) requirements is true and correct.

1. The school has some configuration that includes one or more of grades K-12. (Schools on the same campus with one principal, even K-12 schools, must apply as an entire school.)

2. The school has made adequate yearly progress each year for the past two years and has not been identified by the state as "persistently dangerous" within the last two years.

3. To meet final eligibility, the school must meet the state's Adequate Yearly Progress (AYP) requirement in the 2010-2011 school year. AYP must be certified by the state and all appeals resolved at least two weeks before the awards ceremony for the school to receive the award.

4. If the school includes grades 7 or higher, the school must have foreign language as a part of its curriculum and a significant number of students in grades 7 and higher must take the course.

5. The school has been in existence for five full years, that is, from at least September 2005.

6. The nominated school has not received the Blue Ribbon Schools award in the past five years: 2006, 2007, 2008, 2009 or 2010.

7. The nominated school or district is not refusing OCR access to information necessary to investigate a civil rights complaint or to conduct a district-wide compliance review.

8. OCR has not issued a violation letter of findings to the school district concluding that the nominated school or the district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan from the district to remedy the violation.

9. The U.S. Department of Justice does not have a pending suit alleging that the nominated school or the school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.

10. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school or school district in question; or if there are such findings, the state or district has corrected, or agreed to correct, the findings.

PART II - DEMOGRAPHIC DATA

All data are the most recent year available.

DISTRICT

1. Number of schools in the district: 154 Elementary schools
   (per district designation) 32 Middle/Junior high schools
   39 High schools
   0 K-12 schools
   225 Total schools in district
2. District per-pupil expenditure: 9387

SCHOOL (To be completed by all schools)

3. Category that best describes the area where the school is located: Urban or large central city

4. Number of years the principal has been in her/his position at this school: 4

5. Number of students as of October 1, 2010 enrolled at each grade level or its equivalent in applying school:

Grade	# of Males	# of Females	Grade Total			# of Males	# of Females	Grade Total
PreK	0	0	0		6	0	0	0
K	0	0	0		7	0	0	0
1	0	0	0		8	0	0	0
2	0	0	0		9	77	25	102
3	0	0	0		10	75	32	107
4	0	0	0		11	61	27	88
5	0	0	0		12	60	33	93
							Total in Applying School:	390

6. Racial/ethnic composition of the school:

1 %	American Indian or Alaska Native
11 %	Asian
18 %	Black or African American
57 %	Hispanic or Latino
0 %	Native Hawaiian or Other Pacific Islander
13 %	White
0 %	Two or more races
100 %	Total

Only the seven standard categories should be used in reporting the racial/ethnic composition of your school. The final Guidance on Maintaining, Collecting, and Reporting Racial and Ethnic data to the U.S. Department of Education published in the October 19, 2007 *Federal Register* provides definitions for each of the seven categories.

7. Student turnover, or mobility rate, during the 2009-2010 school year: 0%

This rate is calculated using the grid below. The answer to (6) is the mobility rate.

(1)	Number of students who transferred ***to*** the school after October 1, 2009 until the end of the school year.	0
(2)	Number of students who transferred ***from*** the school after October 1, 2009 until the end of the school year.	0
(3)	Total of all transferred students [sum of rows (1) and (2)].	0
(4)	Total number of students in the school as of October 1, 2009	403
(5)	Total transferred students in row (3) divided by total students in row (4).	0.00
(6)	Amount in row (5) multiplied by 100.	0

8. Percent limited English proficient students in the school: 0%

Total number of limited English proficient students in the school: 0

Number of languages represented, not including English: 0

Specify languages:

9. Percent of students eligible for free/reduced-priced meals: 61%

   Total number of students who qualify: 236

   If this method does not produce an accurate estimate of the percentage of students from low-income families, or the school does not participate in the free and reduced-priced school meals program, supply an accurate estimate and explain how the school calculated this estimate.

10. Percent of students receiving special education services: 100%

    Total number of students served: 4

    Indicate below the number of students with disabilities according to conditions designated in the Individuals with Disabilities Education Act. Do not add additional categories.

1	Autism	0	Orthopedic Impairment
0	Deafness	0	Other Health Impaired
0	Deaf-Blindness	0	Specific Learning Disability
0	Emotional Disturbance	1	Speech or Language Impairment
1	Hearing Impairment	0	Traumatic Brain Injury
0	Mental Retardation	1	Visual Impairment Including Blindness
0	Multiple Disabilities	0	Developmentally Delayed

11. Indicate number of full-time and part-time staff members in each of the categories below:

	Number of Staff	
	Full-Time	**Part-Time**
Administrator(s)	1	0
Classroom teachers	19	2
Special resource teachers/specialists	0	0
Paraprofessionals	1	0
Support staff	2	0
Total number	23	2

12. Average school student-classroom teacher ratio, that is, the number of students in the school divided by the Full Time Equivalent of classroom teachers, e.g., 22:1: 20:1

13. Show the attendance patterns of teachers and students as a percentage. Only high schools need to supply graduation rates. Briefly explain in the Notes section any student or teacher attendance rates under 95% and teacher turnover rates over 12% and fluctuations in graduation rates.

	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Daily student attendance	99%	99%	100%	99%	99%
Daily teacher attendance	96%	96%	93%	95%	95%
Teacher turnover rate	1%	2%	0%	0%	0%
High school graduation rate	99%	100%	100%	100%	100%

If these data are not available, explain and provide reasonable estimates.

The 93% attendance rate during the 2007-2008 school year, was a result of a new procedure put in place in the school district regarding securing substitutes during state and national assessments. Teacher absences were entered as approved absences in order for substitutes to help proctor exams (due to the small number of faculty members). Therefore, the attendance rate appears low, but the teachers were physically in the building teaching students while substitutes helped to monitor and proctor exams (i.e. Advanced Placement exams).

14. For schools ending in grade 12 (high schools): Show what the students who graduated in Spring 2010 are doing as of Fall 2010.

Graduating class size:	86
Enrolled in a 4-year college or university	98%
Enrolled in a community college	2%
Enrolled in vocational training	0%
Found employment	0%
Military service	0%
Other	0%
Total	**100**%

PART III - SUMMARY

The School of Science and Engineering Magnet High School (SEM) opened in the fall of 1982 with students commuting from their neighborhood high schools to attend SEM on a part-time basis. The Dallas Independent School District (DISD) created this Magnet specifically to prepare students for higher education and careers in science, computer science, mathematics, and engineering. The school became full time in the fall of 1994 and moved to the new Yvonne A. Ewell Townview Magnet Center (YAETMC) in 1995. The SEM faculty and their 390 students are led by a dedicated principal to pursue SEM's educational mission: To provide students with a rigorous academic and technical program relating to the sciences and engineering.

Our school offers a variety of courses designed to allow students to acquire the necessary skills required to compete globally in the areas of science and engineering. DISD has capped the total enrollment for SEM students at 400. SEM's current student body is made up of 57% Hispanic, 19% African American, 13% Anglo, and 11% Asian/ Native American/other. The school district identifies 61% of SEM's students as "economically disadvantaged." The faculty constantly challenges students to strive for excellence both academically and socially while providing encouragement and support. SEM's curriculum prepares all students to excel in Advanced Placement (AP) courses, problem-solving skills, and extensive subject knowledge. SEM's extracurricular teams succeed in competitions at the state, national, and international levels. Teachers augment their education each year by attending AP workshops, engineering camps and vertical team meetings. Since the 1996-97 school year, SEM has earned the Texas Education Agency's highest rating of "Exemplary" every year, even as statewide evaluation standards have continued to rise. The students' accomplishments demonstrate their belief in SEM's motto: This is a school where the possibilities are endless.

A sense of "family" pervades the relationships among SEM's students and faculty, both in the classroom and in extracurricular activities. The students exert a positive peer pressure on one another, which is evident in the spring as the national AP Exam and state TAKS testing dates approach. There is a mutually supportive spirit focused on continuing SEM's stunning record of group success on AP Exams and Texas TAKS exams. According to Educational Testing Service data on the number of students who pass AP Exams in various subjects, SEM excels among all other U.S. high schools, public or private, regardless of size. For the past several years, SEM has been the #1 high school in the nation for the number of African-American and Hispanic students passing AP Calculus. This past year, SEM was #1 in the nation for the number of Latino students passing AP Calculus.

This close-knit, high-achieving family of SEM faculty and students attracts a diverse group of supportive parents and industry/academic leaders. Parents are very involved in the Parent-Teacher-Student Association, and they serve on SEM's Site-Based Decision-Making Committee. In 1999, Southern Methodist University and Texas Instruments asked SEM to be the first high school in America to pilot the engineering curriculum now known as the Infinity Project. That curriculum is now used in 20 states and the District of Columbia, under the co-sponsorship of the U.S. Department of Education and the National Science Foundation.

Torrence Robinson of Texas Instruments, a co-founder of the Infinity Project, says this about SEM's contribution: "The Science and Engineering Magnet's participation in the pilot phase of the Infinity Project deployment was critical in that it provided a real-world example of how an effective, rigorous and high-tech engineering curriculum would be accepted within a large urban school district. It also confirmed our belief of how far students' minds could "stretch" with a motivated instructor and supportive principal."

PART IV - INDICATORS OF ACADEMIC SUCCESS

1. Assessment Results:

The State of Texas accountability test, the Texas Assessment of Academic Skills (TAAS) accountability system was introduced in 1990. This test was a significant factor in the State of Texas' statewide school accountability system. The associated school ratings ranged from "Low Performing" to "Exemplary", the highest ranking a school may receive from the Texas Education Agency. In 2002, the Texas school accountability transitioned from the Texas Assessment of Academic Skills "TAAS" to the Texas Assessment of Knowledge and Skills "TAKS". The significance of the change was the alignment and the evaluation to the state curriculum of Texas Knowledge and Skills "TEKS". The TAKS is a more challenging test and it covers Mathematics, Language Arts, Science and Social Studies. Students are tested during the 9th, 10th and 11th grades. The exit level TAKS is given during the student's 11th grade year. On the TAKS, the students who pass either met minimum standards or were commended on their performance. It is important to note that the School of Science and Engineering (SEM) made the transition from the TAAS assessment to the TAKS assessment without losing its Exemplary ranking. SEM's first accountability rating was "Recognized" in the 1996-1997 academic year. Since that time it has maintained the rating of "Exemplary". Both the TAAS and the TAKS have shown SEM's success in reaching all ethnic and economic sub-populations within the student body. The TAKS assessment data gives us a more comprehensive picture of the students across a broader curriculum. The TAKS is only the beginning. The students are world leaders in taking Advanced Placement courses and passing the Advanced Placement exams.

One of the most significant achievements of the SEM is the continual progress made towards closing the achievement gap between majority and minority students. The Science and Engineering Magnet does not exempt any of its student population from either the Texas assessment tests or the national norm-referenced tests. The Iowa Test of Basic Skills and the Stanford 9 are norm-referenced tests. Over 96 percent of our students have been tested each year on the norm-referenced tests. We have been successful in testing more students and raising the median percentiles on norm-referenced tests. We continue to use the norm-referenced testing to assess and improve student performance.
The major assessment strategy the school and the Dallas school district use is the Campus Instructional Leadership Team, (CILT). This group reports to the campus during the summer months to analyze data from the previous year and works with the principal and faculty to develop a strategy to address problem objectives. A new tool introduced during the 2009-2010 school year is the CILT Dashboard. The CILT members use the Dashboard as a quick assessment of student success and school performance. Areas of improvement can be quickly targeted. SEM CILT members played a significant role in the development of the CILT Dashboard and other Dashboards that were made available to DISD teachers during the 2010-2011 school year. The faculty targets objectives in which eighty percent or fewer of the students mastered from the Texas Assessment of Knowledge and Skills. The CILT and the faculty attend vertical team meetings and strategy sessions. Members also work with special population personnel to learn strategies and obtain materials to deliver appropriate instruction to special populations.

Parents, students, teachers, and administrators embrace the philosophy that the study of mathematics is the cornerstone for success in science and engineering related courses. The strong accelerated math program at SEM is the foundation for early exposure to other advanced mathematics and technology courses that are offered, including AP Statistics, AP Computer Science, Robotics, and Discrete Mathematics. The unique opportunities provided by the mathematics program at SEM enhance the students' performances in many other fields of study. The SEM mathematics program has expanded in recent years to accommodate senior students who have successfully completed all of the AP Calculus and Statistics coursework, as well as the fundamental core mathematics courses that are prerequisite to the AP offerings. A new course, Applied Topics and Theory of Applied Mathematics (ATTAM), was introduced during the 2008-2009 school year for senior students who had completed AP Calculus AB and BC, and

for those students who had either completed AP Statistics or were taking the course concurrently with ATTAM.

Campus data may be found at Texas Education Agency website http://www.tea.tx.us. A comprehensive picture of the school is found under the AEIS data.

2. Using Assessment Results:

The principal selects a group of campus leaders which comprise the Campus Instructional Leadership Team (CILT). The CILT team of educators is trained by the Dallas school district at the beginning of each school year. They are given the campus data information and attend a data analysis workshop. The educators are informed of the district goals and directed to incorporate them into their campus goals. This team analyzes campus data, looks at student profiles, conducts item analysis and then develops a plan of action in the form of a Campus Improvement Plan (CIP). The data packet is detailed and gives TAKS results by grade and objective. The CILT compares the school's progress with other schools in the district and state. They target problem objectives, develop a plan of action and make projections. This school considers an objective a problem if fewer than eighty percent of the students master it. Part of this team's responsibility is to conduct formative evaluations during the year and to assist teachers in administering the Campus Improvement Plan. CILT monitors student performance of Advanced Placement Exams, making recommendations to individual departments for methods of improvement. In addition to encouraging all staff teachers to attend Pre AP and AP conferences, CILT members annually attend the national AP Conference in order to garner innovative methods and materials to aid in improving student performance in each subject. The CILT team and the faculty utilize Individual Student Profiles which are a critical component of continuous school improvement. The profile gives a picture of the student and their progress from the beginning of their school career. The information is used to meet the needs of the individual child.

Students in need of academic assistance or support services are referred to the Student Support Team. This group of professionals, who possess varied areas of expertise, search for strategies and services to help students experiencing problems. Other support services are provided as the need arises.

3. Communicating Assessment Results:

SEM prepares marketing materials for the public in order to present its program and its successes to parents, the community, and potential students. As recruiting of students is a critical component of the SEM success story, we are constantly reviewing and updating our assessment data. First of all, the school follows the state law of providing the school report card to parents and makes this accounting available for public access.

The school's Site-Based Decision Making Board, which is composed of parents, students, teachers, business leaders, and community leaders receives summary data about the school's performance. The Site-Based Decision Making Board and the Parent Teacher Association help communicate the school's successes through emails, newsletters, and sharing information with the community.

Being accountable to the school's stakeholders is an integral part of the school's success. The Dallas Independent School District posts individual performance of SEM student data on a secure web site (Gradespeed) allowing access to this portal to all parents who have requested a pin number. The school communicates directly with parents through Parent Teacher Student Association meetings, e-mails and newsletters. The parents of students at risk of failing any course are sent progress reports through the mail and all parents are sent a report card every six weeks. Regular parent/teacher conferences are held a minimum of twice a year.

SEM students attend some of the best universities in the country such as Massachusetts Institute of Technology (MIT), California Institute of Technology (Cal-Tech), Carnegie Mellon, Rice, University of Texas at Austin and the University of Chicago, to name a few. Our most recent class of graduates

received over $10.5 million in scholarships. The annual graduation rate continues to be 100 %. Our best communication tool for our school continues to be students and our graduates. They recruit and give first-hand accounts of the quality of their high school program.

4. Sharing Lessons Learned:

SEM teachers take the initiative to present to local, state, and national teacher organizations. They work on curriculum committees and as curriculum trainers for new and veteran teachers. They also serve as mentors to other teachers. The Advanced Placement teachers present to AP and Pre-AP teachers and provide tutoring sessions to students all over the district during district sponsored Saturday AP Prep Sessions. SEM teachers also participate in vertical team meetings with a DISD middle school, Dallas Environmental Science Academy (DESA). They lead vertical team meetings with other teachers in the same content area, and contribute to a collection of materials used in classrooms, laying the foundation for Advanced Placement students. Content teachers meet regularly with area teachers to discuss district target areas and share teaching strategies. This forum allows teachers to address district problem objectives and work toward improving district student success.

SEM serves as a world renowned model for success. Delegations from Europe, Asia, and other states visit the school and meet with personnel to discuss strategies and curriculum that have contributed to the students' success. The school has served as a model magnet school in the United States. In the Dallas school district, SEM has been a model in being the first to implement the "fast-track" math program that enables students to prepare earlier to take AP mathematics classes. Other high schools have now followed this example. SEM also identified the advantages of providing a summer boot camp to prepare students for high school life. This boot camp model has been adopted by the Dallas school district.
SEM was one of the original Dallas O'Donnell Foundation schools (now part of the Texas Instrument Foundation schools) that paved the way for the exponential growth of students throughout the district passing the Advanced Placement exam. This model is now being utilized in many schools across the State of Texas. SEM faculty members have been recognized by the Texas Instruments Foundation as leaders in STEM teaching at both the local and state levels. During the 2009-2010 school year, one SEM teacher was inducted into the Texas Instruments STEM Academy as a TI Fellow, and another was named the O'Donnell Foundation Teacher of the Year.

December 2010, SEM students, teachers, and administrators participated in a Digital Town Hall Meeting sponsored by PBS News Hour, the Intel Corporation, The Aspen Institute, and the Information Technology and Innovation Foundation (ITIF).

PART V - CURRICULUM AND INSTRUCTION

1. Curriculum:

The Science and Engineering Magnet High School (SEM) was designed with a mission to provide students with a rigorous academic and technical program relating to the sciences and engineering. The curriculum has been developed over a period of years to reflect the changing requirements in the industrial, technological, and academic world. The course work emphasizes problem solving and analytical skills that are necessary to be successful in the sciences and engineering, and will help students meet the demands of a technical workforce.

SEM students' graduation plans require a minimum of three years of a foreign language. Spanish, French, Latin and German are available, and Latin is currently a required course for SEM freshmen. Students are offered courses in the arts including band, orchestra, art, choir and theater. Health, nutrition programs, and physical education courses are also provided for all students. Students are required to participate in the Fitnessgram program (a comprehensive health and physical assessment) each year . The physical assessment is administered through physical education classes, in order to assess the overall physical health of each student. Each year, the results of the Fitnessgram test are reported to the state of Texas. The school also offers a variety of intramural sports and physical education clubs for students with an interest in extra-curricular sports and activities. The curriculum includes high standards and the goal of developing the whole student.

SEM offers primarily Pre-Advanced Placement and Advanced Placement classes that prepare students to be successful in the university setting upon graduation. If Advanced Placement Tests are passed, these classes give the student an opportunity to graduate from high school with college credit sufficient for sophomore standing or higher.
The math curriculum is designed to move the student into higher levels of math as early as possible. Most SEM students are enrolled in or have completed their first calculus course by the beginning of their 11th grade year, and many are in their second year of calculus. This acceleration of the mathematics courses does not occur in the traditional high school. It is possible at SEM due to the concentration of students with strong interests in mathematics, science, and engineering.

With their advanced math skills, SEM students are able to move into other courses such as AP Computer Science, AP Chemistry, AP Physics C, and Introduction to Engineering, where math knowledge is used in practical applications. SEM's curriculum is designed with the main courses interweaving into other classes. The mathematics, chemistry, and physics and engineering courses are all interdependent offerings and each utilizes and supports the other objectives.

The School of Science and Engineering Magnet has course sequences and offerings that are not found in the traditional high school. An example of this is SEM's 10th grade science curriculum. During the 10th grade year, SEM students take both Pre-AP Chemistry and Pre-AP Physics. Both are taught with higher-order thinking skills as standard practices and requires the use of more advanced mathematics than those required of the normal 10th grade student. With both Pre-AP Physics and Pre-AP Chemistry taken concurrently, students receive a solid foundation allowing them to move to AP science classes in their 11th grade year. Many SEM 11th graders enroll in "Super Class", which is a three AP course sequence: AP Chemistry, AP Physics B and AP Chemistry/Physics B Lab. This sequence gives students the normal AP Chemistry and Physics B lecture classes, but the students also are able to complete more than twice as many Chemistry and Physics labs as in the normal high school curriculum. This increases the student's chances of success on the AP Chemistry and AP Physics B exam. In four years, SEM students routinely complete six to eight science courses with a minimum of four being Advanced Placement, and five to seven mathematics courses with three being Advanced Placement. The results of this curriculum are shown by the success SEM students' have had in the technology, engineering, medical and science fields at major colleges and universities.

2. Reading/English:

Since no SEM students read below grade level, the SEM English department offers a 4- or 5-course curriculum to incoming students. Students complete both Pre-AP English I and Pre-AP English II materials during their freshman year, reading a minimum of two plays, two novels, one autobiography, and one epic for their independent reading assignments. They also read stories, poems, and non-fiction selections. In the late winter, freshmen may choose to complete a screening test for AP English III: Language and Composition, in order to determine whether or not they qualify for "fast-tracking" in English. Students who pass the screening test then take the state's Exam for Acceleration (EFA) in June. If they pass the EFA with a grade of at least 90%, then they enter AP English III: Language and Composition at the beginning of their sophomore year.

Sophomores, who do not "fast-track", enroll in Pre-AP English II. They have already completed the state requirements for this course; therefore, SEM teachers use this year for intensive preparatory work in composition and in close reading techniques. "Fast-track" sophomores enroll in AP English III: Language and Composition classes together with juniors. These students primarily read non-fiction and develop skills in argument and persuasion, in preparation for the AP English III: Language and Composition exam during the spring semester. After completing AP English III: Language and Composition, students enroll in AP English IV: Literature and Composition, as juniors or seniors. Students who complete the 4-year curriculum by the end of their junior year may elect to take Humanities during their senior year. Students graduating from SEM, while especially gifted in mathematics and science, also possess a solid grounding in verbal and written communication skills obtained through their English coursework.

3. Mathematics:

The school's mission is to provide students a rigorous academic and technical program relating to the sciences and engineering. The rigors of this program require students to master the state required essential skills and knowledge before progressing to advanced courses. Using the Advanced Placement (AP) math curriculum, the mathematics program at the School of Science and Engineering Magnet High School prepares students for the rigors of college-level work. SEM allows students who have the desire to move through the curriculum at an accelerated pace. The majority of freshmen students are enrolled in a "fast-track" math program, enabling them to complete Pre-AP Algebra II and Pre-AP Calculus in one year, and gives them mathematics on a daily basis, which was the determining factor in the decision to add fast-track math to the curriculum. Most of these students are then able to complete successfully AP Calculus AB during their sophomore year and AP Calculus BC during their junior year. A smaller group of freshmen students are enrolled in the "Super Fast Track" program. These students will complete Pre-AP Algebra II, Pre-AP Pre-Calculus, and AP Calculus AB during one year. In 2008, a new mathematics course was added to the SEM Math curriculum. ATTAM- Advanced Topics of the Theory of Applied Mathematics is a senior level course designed for those students who have successfully completed all the prerequisite courses and AP Mathematics courses. Because a number of students successfully complete the entire College Board Advanced Placement Mathematics curriculum by their junior year, SEM teachers recognized the need for an additional senior course so that students could stay current with the practice of mathematics and be better prepared for their first year in college mathematics.

Students who are not ready for the "fast-track" are enrolled in Pre AP math courses and encouraged to complete AP Calculus AB by their senior year. Before- and after-school tutoring, peer tutoring, required independent study periods for students in AP Calculus AB, and Saturday math prep sessions all help to prepare students for success on the AP Calculus exams in May.

The result of the math program is a record of students passing AP Calculus exams. For the last three years, College Board data shows that SEM has been the #1 high school in the nation for the total number of African American and Hispanic students passing AP Calculus exams. In a letter to SEM's Principal, the College Board states that SEM "has been identified as having the strongest AP Calculus BC course(s) in the world among schools in your size range (less than 500 High School students)." - Trevor Packer, Executive Director of Advanced Placement Programs, The College Board. SEM has been recognized as

the number one High School in Texas by the Children at Risk organization 2009 - 2010. SEM continues to be rated "Exemplary" by the Texas Education Agency. It has maintained this rating for over ten consecutive years. SEM was named an EXEMPLARY school by the College Board in the 6th Annual AP® Report to the Nation (2009-2010). The School of Science and Engineering had the largest number of Latino students from the class of 2009 who scored a 3 or higher on the AP® Calculus AB Exam. SEM received the Siemens Award for Advanced Placement (2008 Award Recipient).

4. Additional Curriculum Area:

The School of Science and Engineering Magnet has course sequences and offerings that are not found in the traditional high school. An example of this is SEM's curriculum. All 9th graders start out taking Pre-AP Biology, as they do at most schools. However, during the 10th grade year SEM students take both Pre-AP Chemistry and Pre-AP Physics. Both are taught with higher-order thinking skills as standard practices and require the use of more advanced mathematics than those required of the normal 10th grade student. Approximately 50% of our 10th graders are also taking AP Biology giving them three science classes during their sophomore year. With both Pre-AP Physics and Pre-AP Chemistry taken concurrently, students receive a solid foundation allowing them to move to the higher AP science classes in their 11th grade year.

Approximately 50% of the SEM 11th graders enroll in "Super Class", a three AP course sequence: AP Chemistry, AP Physics B and AP Chemistry/Physics B Lab Class. The students take the normal AP Chemistry and Physics B lecture classes, but they also have Lab Class where they complete a laboratory every period (58 labs were completed during the 2009-2010 year). This is well over twice the number completed in the normal high school curriculum. This extra lab experience increases the students' chances of success on both the AP Chemistry and the AP Physics B exams. It also provides them with skills that most will find valuable in the university setting later. Students completing "Super Class" enroll in AP Physics C as a 12th grader setting them up to move directly into college and be successful. "Super Class" has proven to be highly successful with SEM's 400 students comprising 45% to 50% of all AP Chemistry and AP Physics Exams passed in the Dallas ISD with a population of 37,600 students (Grades 9 to 12).

Students at SEM also have the opportunity to take honors or advanced science courses in subjects such as AP Environmental Science, Advanced Bio Research (Electron microscopy), Advanced Aquatic Science, and Astronomy if they desire. This allows students flexibility to fit into any field of study they desire to pursue.

In four years, SEM students routinely complete six to eight science courses with a minimum of four being Advanced Placement, and five to seven mathematics courses with three being Advanced Placement. The results of this curriculum are shown by the success SEM students' have had in the technology, engineering, medical and science fields at major colleges and universities.

5. Instructional Methods:

The key factor in SEM's delivery of instruction is that content is not taught in isolation. The program is integrated and well rounded. Freshmen become acclimated to high school life and expectations via a summer boot camp that includes instruction in mathematics, English and Study Skills. Teachers at all levels integrate the curriculum by collaborating and sharing topics and strategies. Learning is enhanced by tutoring sessions, Saturday Advanced Placement (AP) prep sessions, televised "Calculus Live." Teachers integrate engineering applications into mathematics courses. Teachers address various learning styles through lectures, visual presentations, hands-on activities, labs, research activities and cooperative learning. Students prepare for the next academic year through content-specific summer tutorials entitled "SEM Boot Camp".

In Aquatic Science, students utilize their skills in chemistry and physics, as they relate to water quality and the environment. This instructional method requires the students to apply all of these principles in

analyzing water samples and aquatic environments. To collect water samples and examine environments, the students perform teacher-supervised field work in the Trinity River area near the school.

For students with an interest in biology or medicine, SEM offers a course in Advanced Biological Research dealing with electron microscopy. SEM has one of the ten (or fewer) operating electron microscopes in America's high schools. This course teaches students the principles of transmission, electron microscope operation, including sample preparation, electron microscope operation, and microscope care. The students must not only prepare and analyze samples, but also conduct individual research projects requiring an oral defense of their research in front of faculty members - similar to that required for obtaining an advanced college degree.

6. Professional Development:

The SEM faculty members are all life-long learners believing that one is never too young or old to advance their knowledge. The faculty far exceeds the Dallas Independent School District's and State of Texas' minimum staff development requirements. All members have received the state minimum of 30 required hours of gifted education and each receives a minimum of 6 hours update each year. Teachers also receive additional training in the teaching of Advanced Placement (AP) and Pre-Advanced Placement (Pre-AP) courses via College Board summer workshops and training sessions throughout the academic year. Core teachers also have been trained by "Laying the Foundation" staff to add more rigor to their already rigorous Pre-AP courses. Teachers also take advantage of elective staff development in areas such as technology, classroom management, and other curriculum enhancing workshops. Teachers participate in vertical and horizontal teams both within their subject content and cross curricular, faculty sharing, continuing education. Most have advanced degrees or are in the pursuit of one or are working toward additional certifications. They partner with organizations such as Texas Instruments, Southern Methodist University, and the University of Texas at Dallas to stay informed on state-of-the-art technology and teaching methodologies.

The first level of evidence is the school's consistent performance with the Texas Education Agency indicators for success and earning the Exemplary designation. Their efforts bear fruit in the performances of SEM students in a variety of Advanced Placement Examinations.

7. School Leadership:

Effective leaders are life-long learners and innovators. The leadership philosophy of our school embodies both of these attributes. The role of the principal is to primarily lead by example by continuously striving to improve and create better opportunities designed to positively impact student achievement and success. Another important role of the principal is to provide support to students, teachers, and parents. The schools' resources and materials are aligned with the Campus Improvement Plan each school year. Along with the Campus Instructional Leadership Team, the principal conducts a review and comprehensive analysis of the student performance data and campus needs prior to the beginning of each school year. As a result of this analysis, resources, supplies, and professional development needs are customized for the campus. Support is provided for all students by the principal, teachers, counselors and the campus based student support team. As a campus, it is our strong belief that students "don't care how much you know, until they know how much you care". We provide support through open communication and most importantly relationship building with our students.

Students are provided with a "How to Prepare for College Entrance" booklet created by the principal and counseling department for distribution to SEM students in order to help them navigate successfully through the college planning process. The administration monitors and provides quality feedback to all teachers and staff members through classroom walkthroughs, LearningWalksSM, and classroom observations. A weekly newsletter is published in collaboration with the Parent Teacher Student Association and is distributed to all students, parents, community members, faculty, and staff members. The purpose of the newsletter is to communicate student, teacher, and parent recognition in addition to pertinent information such as: scholarship information, and parent education programs. The parent

education programs are a vital component of our students' success. The programs are designed and presented by SEM administration, the counseling department and the Parent Teacher Student Association. Important topics range from SAT/ACT preparation, Advanced Placement Information Sessions, Financial Aid Presentations, and Summer Intern Opportunities, to name a few.

Lastly, we celebrate student achievement through several recognition programs. Outstanding students at each grade level are recognized each marking period through the EAGLES awards program. Students are nominated by their teachers for academic excellence and recognized school-wide as distinguished scholars. Outstanding faculty members are recognized for having extraordinary impact on student achievement through the Educators Affecting Growth and Learning for Every Student (E.A.G.L.E.S.) teacher recognition program.

PART VII - ASSESSMENT RESULTS

STATE CRITERION-REFERENCED TESTS

Subject: Mathematics Grade: 10 Test: TAKS

Edition/Publication Year: 2006 - 2010 Publisher: TEA

	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Testing Month	Apr	Apr	Apr	Apr	Apr
SCHOOL SCORES					
Met Standard	100	100	100	100	100
Commended	85	85	82	70	60
Number of students tested	93	101	94	119	89
Percent of total students tested	100	100	100	100	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Met Standard	100	100	100	100	100
Commended	85	84	82	71	67
Number of students tested	62	57	44	62	43
2. African American Students					
Met Standard	100	100	100	100	100
Commended	75	67	69	45	65
Number of students tested	12	21	16	20	17
3. Hispanic or Latino Students					
Met Standard	100	100	100	100	100
Commended	83	90	81	79	57
Number of students tested	54	60	48	56	51
4. Special Education Students					
Met Standard					
Commended					
Number of students tested					
5. English Language Learner Students					
Met Standard					
Commended					
Number of students tested					
6. White					
Met Standard	100	100	100	100	100
Commended	88	92	91	67	63
Number of students tested	16	13	23	36	19
NOTES:					

11TX2

STATE CRITERION-REFERENCED TESTS

Subject: Reading Grade: 10 Test: TAKS

Edition/Publication Year: 2006 - 2010 Publisher: TEA

	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Testing Month	Mar	Mar	Mar	Mar	Mar
SCHOOL SCORES					
Met Standard	100	100	100	100	100
Commended	39	47	46	44	53
Number of students tested	93	101	94	119	89
Percent of total students tested	100	100	100	100	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Met Standard	100	100	100	100	100
Commended	37	42	41	39	53
Number of students tested	62	57	44	62	17
2. African American Students					
Met Standard	100	100	100	100	100
Commended	58	38	31	20	53
Number of students tested	12	21	16	20	17
3. Hispanic or Latino Students					
Met Standard	100	100	100	100	100
Commended	35	50	44	39	47
Number of students tested	54	60	48	56	51
4. Special Education Students					
Met Standard					
Commended					
Number of students tested					
5. English Language Learner Students					
Met Standard					
Commended					
Number of students tested					
6. White					
Met Standard	100	100	100	100	100
Commended	50	46	57	58	68
Number of students tested	16	13	23	36	19
NOTES:					

11TX2

STATE CRITERION-REFERENCED TESTS

Subject: Mathematics Grade: 11 Test: TAKS

Edition/Publication Year: 2006 - 2010 Publisher: TEA

	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Testing Month	Apr	Apr	Apr	Apr	Apr
SCHOOL SCORES					
Met Standard	100	100	100	100	100
Commended	89	91	88	79	63
Number of students tested	97	87	115	76	95
Percent of total students tested	100	99	100	99	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Met Standard	100	100	100	100	100
Commended	88	95	92	76	64
Number of students tested	60	43	61	42	36
2. African American Students					
Met Standard	100	100	100	100	100
Commended	79	73	74	67	45
Number of students tested	19	15	19	15	29
3. Hispanic or Latino Students					
Met Standard	100	100	100	100	100
Commended	90	94	91	83	66
Number of students tested	59	47	56	42	35
4. Special Education Students					
Met Standard					
Commended					
Number of students tested					
5. English Language Learner Students					
Met Standard					
Commended					
Number of students tested					
6. White					
Met Standard	100	100	100	100	100
Commended	92	100	88	88	79
Number of students tested	12	18	33	16	24
NOTES:					

11TX2

STATE CRITERION-REFERENCED TESTS

Subject: Reading Grade: 11 Test: TAKS

Edition/Publication Year: 2006-2010 Publisher: TEA

	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Testing Month	Mar	Mar	Mar	Mar	Mar
SCHOOL SCORES					
Met Standard	99	100	98	99	98
Commended	74	60	65	61	44
Number of students tested	97	87	114	76	91
Percent of total students tested	100	99	100	99	97
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Met Standard	98	100	100	98	100
Commended	67	63	68	67	40
Number of students tested	60	43	60	42	35
2. African American Students					
Met Standard	100	100	100	100	100
Commended	58	67	47	53	45
Number of students tested	19	15	19	15	29
3. Hispanic or Latino Students					
Met Standard	98	100	98	98	100
Commended	76	57	70	62	44
Number of students tested	59	47	56	42	34
4. Special Education Students					
Met Standard					
Commended					
Number of students tested					
5. English Language Learner Students					
Met Standard					
Commended					
Number of students tested					
6. White					
Met Standard	100	100	97	100	91
Commended	92	50	69	63	36
Number of students tested	12	18	32	16	22
NOTES:					

11TX2

STATE CRITERION-REFERENCED TESTS

Subject: Mathematics Grade: 9 Test: TAKS

Edition/Publication Year: 2006 - 2010 Publisher: TEA

	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Testing Month	Apr	Apr	Apr	Apr	Apr
SCHOOL SCORES					
Met Standard	100	100	100	100	100
Commended	93	99	94	85	81
Number of students tested	128	93	104	102	127
Percent of total students tested	99	100	100	100	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Met Standard	100	100	100	100	100
Commended	94	98	90	88	82
Number of students tested	77	60	52	51	66
2. African American Students					
Met Standard	100	100	100	100	100
Commended	96	100	83	78	56
Number of students tested	28	9	24	18	25
3. Hispanic or Latino Students					
Met Standard	100	100	100	100	100
Commended	90	98	97	90	88
Number of students tested	72	56	60	52	59
4. Special Education Students					
Met Standard					
Commended					
Number of students tested					
5. English Language Learner Students					
Met Standard					
Commended					
Number of students tested					
6. White					
Met Standard	100	100	100	100	100
Commended	94	100	100	81	86
Number of students tested	18	17	13	26	35
NOTES:					

11TX2

STATE CRITERION-REFERENCED TESTS

Subject: Reading Grade: 9 Test: TAKS

Edition/Publication Year: 2006 - 2010 Publisher: TEA

	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Testing Month	Mar	Mar	Mar	Mar	Mar
SCHOOL SCORES					
Met Standard	100	100	100	100	100
Commended	33	61	66	50	38
Number of students tested	129	93	104	102	127
Percent of total students tested	100	100	100	100	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Met Standard	100	100	100	100	100
Commended	30	62	73	49	41
Number of students tested	77	60	52	51	66
2. African American Students					
Met Standard	100	100	100	100	100
Commended	29	78	54	44	36
Number of students tested	28	9	24	18	25
3. Hispanic or Latino Students					
Met Standard	100	100	100	100	100
Commended	33	64	73	52	37
Number of students tested	73	56	60	52	59
4. Special Education Students					
Met Standard					
Commended					
Number of students tested					
5. English Language Learner Students					
Met Standard					
Commended					
Number of students tested					
6. White					
Met Standard	100	100	100	100	100
Commended	33	53	46	46	43
Number of students tested	18	17	13	26	35
NOTES:					

11TX2

STATE CRITERION-REFERENCED TESTS

Subject: Mathematics Grade: 0

	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Testing Month	Apr	Apr	Apr	Apr	Apr
SCHOOL SCORES					
Met Standard	100	100	100	100	100
Commended	89	91	88	77	69
Number of students tested	318	281	313	297	311
Percent of total students tested	100	100	100	100	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Met Standard	100	100	100	100	100
Commended	89	93	89	78	73
Number of students tested	199	160	157	155	145
2. African American Students					
Met Standard	100	100	100	100	100
Commended	86	76	76	62	54
Number of students tested	59	45	59	53	71
3. Hispanic or Latino Students					
Met Standard	100	100	100	100	100
Commended	88	94	90	84	72
Number of students tested	185	163	164	150	145
4. Special Education Students					
Met Standard					
Commended					
Number of students tested					
5. English Language Learner Students					
Met Standard					
Commended					
Number of students tested					
6. White					
Met Standard	100	100	100	100	100
Commended	91	98	91	76	78
Number of students tested	46	48	69	78	78
NOTES:					

11TX2

STATE CRITERION-REFERENCED TESTS

Subject: Reading Grade: 0

	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Testing Month	Mar	Mar	Mar	Mar	Mar
SCHOOL SCORES					
Met Standard	100	100	99	100	99
Commended	47	56	60	50	44
Number of students tested	319	281	312	297	307
Percent of total students tested	100	100	100	100	99
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Met Standard	99	100	100	99	100
Commended	43	55	62	50	44
Number of students tested	199	160	156	155	144
2. African American Students					
Met Standard	100	100	100	100	100
Commended	44	56	46	38	44
Number of students tested	59	45	59	53	71
3. Hispanic or Latino Students					
Met Standard	99	100	99	99	100
Commended	47	57	63	50	42
Number of students tested	186	163	164	150	144
4. Special Education Students					
Met Standard					
Commended					
Number of students tested					
5. English Language Learner Students					
Met Standard					
Commended					
Number of students tested					
6. White					
Met Standard	100	100	99	100	97
Commended	54	50	60	55	47
Number of students tested	46	48	68	78	76
NOTES:					

11TX2